TECHNICAL STATEMENT OF WORK

FOR

Airfield Drainage Ditch Repairs

AT

Plant 42 Palmdale CA

FOR PROJECTS:

TTQK-11-CC01: Repair Drainage Ditch East at South Side of Runway 22 from Taxiway Sierra (Ditch #4)

TTQK-11-CC02: Rebuild Drainage Ditch at South side of Site 5 Perimeter Road (Ditch #3)

TTQK-11-CC03: Rebuild Drainage Ditch at East side of Taxiway Sierra (Ditch #12)

TTQK-10-CC01: Repair Drainage Ditch East at South Side of Runway 22 from Taxiway Sierra (Ditch #4) Plant 42 - Palmdale, CA

SCOPE OF WORK

This project consists of designing and installing drainage features within the footprint of the Plant 42 airfield. The project repairs the large drainage ditch along the south side of RUNWAY 22 from Taxiway Sierra to the east end of the runway. Excavate a new ditch along the north side of the new perimeter roadway, and use the excavated material to fill the existing ditch(s) currently within 1,000 feet of Runway 22. Install new culverts where necessary, and provide a new concrete lined channel over the subsurface high voltage cables at two separate locations where the ditch will cross the cables near the east end of the runway. The concrete channels shall each be 40' in length, centered on the cable crossing. The length of ditch to be relocated is approximately 7,000 linear feet. Provide road crossings over the new channel that include a minimum of five - 36" diameter culverts, or approved equivalent, with rip rap erosion protection at each location. Fill in and grade all areas to meet UFC clear zone 3-260-1 criteria. Provide rip rap erosion protection at all junctions and changes in alignment. Demolish approximately 3,600 linear feet of existing road, re-grade to UFC requirements, and restore to natural ground cover.

Provide import class 2 culvert bedding material for culverts. When making mechanical connections with existing culverts, create a secure water-tight connection and backfill with cement slurry. Provide drop inlets along each culvert spaced at no more than every 500 linear feet. Install rip rap and concrete erosion protection features at each inlet and outlet. Where culverts daylight, install flared end sections that meet UFC grading criteria. Grade disturbed areas to meet UFC clear zone criteria and provide dust palliative or hydro seeding on all disturbed areas. Provide recycle waste manifest for all construction waste or debris encountered during construction and any import. All drop inlets and culverts shall be at a minimum, engineered to support 80,000 lb. fire trucks that may cross airfield when responding to emergencies. Drop inlet structures and grates located inside the clear zone must be rated for 747-8 aircraft (970,000 lbs).

Design drawings and specifications are to be signed and stamped by a registered engineer and shall include at a minimum: detailed plans and specifications, hydraulic and hydrologic calculations, load calculations, erosion protection, rip rap layout and sizing, backfill specifications, borrow source identification, borrow source grading and erosion protection design, storm water pollution and prevention plan (SWPPP), and permits (including FAA). The hydraulic and hydrologic calculations must consider upstream watersheds, as well as the Master Drainage Plan for the City of Palmdale.

TTQK-10-CC02: Rebuild Drainage Ditch at South side of Site 5 Perimeter Road (Ditch #3) Plant 42 – Palmdale, CA

SCOPE OF WORK

This project consists of designing and installing drainage features within the footprint of the Plant 42 airfield. The project repairs the drainage ditch (ditch # 3) on the south side of the Site 5 perimeter road by installing approximately 1,000 linear feet of 24" culvert and 2,400 linear feet of 36" culvert, including approximately 10 drop inlets. Fill in and grade all areas to meet Uniform Facilities Criteria (UFC) 3-260-1 clear zone criteria. Where crossing the existing fire road, saw cut the road, install new culvert(s), reconstruct the roadway, and provide maintenance of traffic throughout all construction activities. Provide a temporary road suitable for the fire trucks or maintain traffic by other approved means during construction.

Install reinforced concrete pipe (RCP) culverts (or approved equal) in the invert of the existing ditch. Provide import class 2 culvert bedding material for the culvert and backfill the channel to surrounding grades. When making mechanical connections with existing culverts, create a secure water-tight connection and backfill with cement slurry. Provide drop inlets along each culvert spaced at no more than every 500 linear feet. Install rip rap and concrete erosion protection features at each inlet and outlet. Where culverts daylight, install flared end sections that

meet UFC grading criteria. Grade disturbed areas to meet UFC clear zone criteria and provide dust palliative or hydro seeding on all disturbed areas. Provide recycle waste manifest for all construction waste or debris encountered during construction and any import. All drop inlets and culverts shall be at a minimum, engineered to support 80,000 lb. fire trucks that may cross airfield when responding to emergencies. Drop inlet structures and grates located inside the clear zone must be rated for 747-8 aircraft (970,000 lbs).

Design drawings and specifications are to be signed and stamped by a registered engineer and shall include at a minimum: detailed plans and specifications, hydraulic and hydrologic calculations, load calculations, erosion protection, rip rap layout and sizing, backfill specifications, borrow source identification, borrow source grading and erosion protection design, SWPPP, and permits (including FAA). The hydraulic and hydrologic calculations must consider upstream watersheds, as well as the Master Drainage Plan for the City of Palmdale.

TTQK-10-CC03: Rebuild Drainage Ditch at East side of Taxiway Sierra (Ditch #12) Plant 42 – Palmdale, CA

SCOPE OF WORK

This project consists of designing and installing drainage features within the footprint of the Plant 42 airfield. Repair the ditch on the east side of Taxiway Sierra between Runway 22 and the perimeter road. Install approximately 1,000 linear feet of 36” culvert. Fill in and grade all areas to meet UFC clear zone criteria, including outfall erosion protection.

Install RCP culverts (or approved equal) in the invert of the existing ditch. Provide import class 2 culvert bedding material for the culvert and backfill the channel to surrounding grades. When making mechanical connections with existing culverts, create a secure water-tight connection and backfill with cement slurry. Provide drop inlets along each culvert spaced at no more than every 500 linear feet. Install rip rap and concrete erosion protection features at each inlet and outlet. Where culverts daylight, install flared end sections that meet UFC grading criteria. Grade disturbed areas to meet UFC clear zone criteria and provide dust palliative or hydro seeding on all disturbed areas. Provide recycle waste manifest for all construction waste or debris encountered during construction and any import. All drop inlets and culverts shall be at a minimum, engineered to support 80,000 lb. fire trucks that may cross airfield when responding to emergencies. Drop inlet structures and grates located inside the clear zone must be rated for 747-8 aircraft (970,000 lbs).

Design drawings and specifications are to be signed and stamped by a registered engineer and shall include at a minimum: detailed plans and specifications, hydraulic and hydrologic calculations, load calculations, erosion protection, rip rap layout and sizing, backfill specifications, borrow source identification, borrow source grading and erosion protection design, SWPPP, and permits (including FAA). The hydraulic and hydrologic calculations must consider upstream watersheds, as well as the Master Drainage Plan for the City of Palmdale.